

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ta-Shuang Kuan, Chia-Tsung Chan, Chia-Te Lin
5 Appl. No.: 10/710,506 Filing Date: 07/16/2004
Patent No.: 7,215,391 Issue Date: 05/08/2007
Docket No.: NAUP0588USA Confirmation No.: 4505

10 Title: LIQUID CRYSTAL ON SILICON DISPLAY WITH MICRO COLOR
FILTERS POSITIONED ON THE TOP SURFACE OF THE
TRANSPARENT SUBSTRATE

15 To: Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

Subject: **Submission of Prior Art under 37 CFR §1.501**

20 Dear Sir,

This is a submission of prior art under 37 CFR §1.501. The applicants wish to make of record each of the documents listed on the accompanying form PTO/SB/42.

25 The cited reference contained in this submission was first cited in the Office action mailed on March 30, 2007 against the counterpart China patent application No. 2004100709599, which are no more than three months prior to the filing of the citation of prior arts. The cited references contain China
30 patents CN 1360220A, CN 2514447Y, and CN 1470909A. Copies of the three patents and an English-language equivalent US patent No. 6,909,479 of CN 1360220A are submitted and also listed

in the form PTO/SB/42.

According to the requirement set forth in 37 CFR 1.98(a)(3) and MPEP 609.04(a) III, English language abstract of cited 5 references CN 2514447Y and CN 1470909A is included herewith to fulfill the concise explanation requirement.

CN 2514447Y (filed June 26, 2001)

The miniature reflecting colour display device includes 10 a silicon substrate with CMOS structures, an array of metal reflective layers, a lower alignment film, a liquid crystal layer, an upper alignment film, a transparent conductive layer, and a glass substrate stacked from bottom to top to be packaged as a display device. The display device also includes micro 15 color filters with three colors arranging as an array, positioned between the upper alignment film and the transparent conductive layer. The optical system of a color projector can be simplified according to the display device, which also provides advantages of low volume, low cost, and 20 high reliability to the color projector.

CN 1470909A (filed July 26, 2002)

The main point of the invention is that a liquid crystal layer is setup between the upper and lower insulated base 25 plates; a half-reflection film layer is coated on the lower insulated base plate. A color light filter layer constituted by photoresistive with high color saturation and a resin protective layer are formed on the half-reflection film in sequence. A total reflection film is coated on the protective 30 layer. Finally, patternizing total reflection film is carried out.

Respectfully submitted,

Winston Hsu

Date: 2007/6/27

5 Winston Hsu, Patent Agent No. 41,526
P.O. BOX 506, Merrifield, VA 22116, U.S.A.
Voice Mail: 302-729-1562
Facsimile: 806-498-6673
e-mail : winstonhsu@naipo.com

10

Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

37 CFR 1.501 INFORMATION DISCLOSURE CITATION IN A PATENT (Sheet <u>1</u> of <u>1</u>)	Docket Number (Optional)	Patent Number
	NAUP0588USA	7,215,391
	Applicant	UNITED MICROELECTRONICS CORP.
	Issue Date	Art Unit
05/08/2007	2871	

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	CN 1360220A	07/24/2002	CN	G02F	1/133	V	
	CN 1470909A	01/28/2004	CN	G02F	1/1333	V	
	CN 2514447Y	10/02/2002	CN	G09G	1/28	V	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER _____ DATE CONSIDERED _____

This collection of information is required by 37 CFR 1.501. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.